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Although the Situation is Improving, Women and Children Still Face Serious Health Problems in India

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India's second National Family Health Survey (NFHS-2), conducted between November 1998 and December 1999, collected information on infant, child, and maternal mortality, the health and nutritional status of women and children, and aspects of health care and the utilization of health services. The survey also collected information on fertility and family planning.

Much of the information collected in NFHS-2 was collected in the first National Family Health Survey (NFHS-1), conducted in 1992–93, making it possible to identify trends over the intervening period. In addition, NFHS-2 covered several new or expanded health topics with important policy implications, such as reproductive health, women's nutrition, anemia in women and children, and salt iodization. This issue of *Asia-Pacific Population & Policy* summarizes some of the most important findings from the two surveys on women's and children's health and health care.

INFANT AND CHILD MORTALITY

Infant mortality declined by 14 percent between 1992–93 and 1998–99, and child mortality declined by 12 percent (Figure 1). Yet at 68 deaths per 1,000 live births, infant mortality is still higher in India than in Asia as a whole (56 deaths per 1,000 live births according to the Population Reference Bureau) or in all developing countries (63).

Efforts to improve infant and child survival might usefully focus on specific groups of children with particularly high mortality rates. These include children from rural areas, children whose mothers are illiterate, children belonging to scheduled castes or tribes, and children from poor households. Among India's major states, infant mortality is especially high in Uttar Pradesh, Madhya Pradesh, Orissa, and Rajasthan.

Survey results show that medical care for mothers has an important effect on child survival. Infant mortality rates are more than twice as high for children whose mothers did not receive

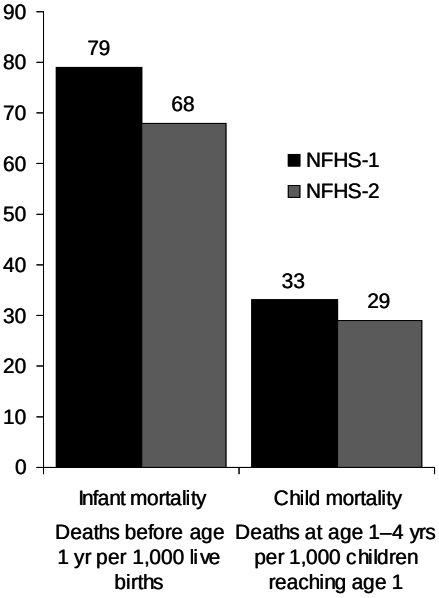

Figure 1 Infant and child mortality rates, NFHS-1 and NFHS-2

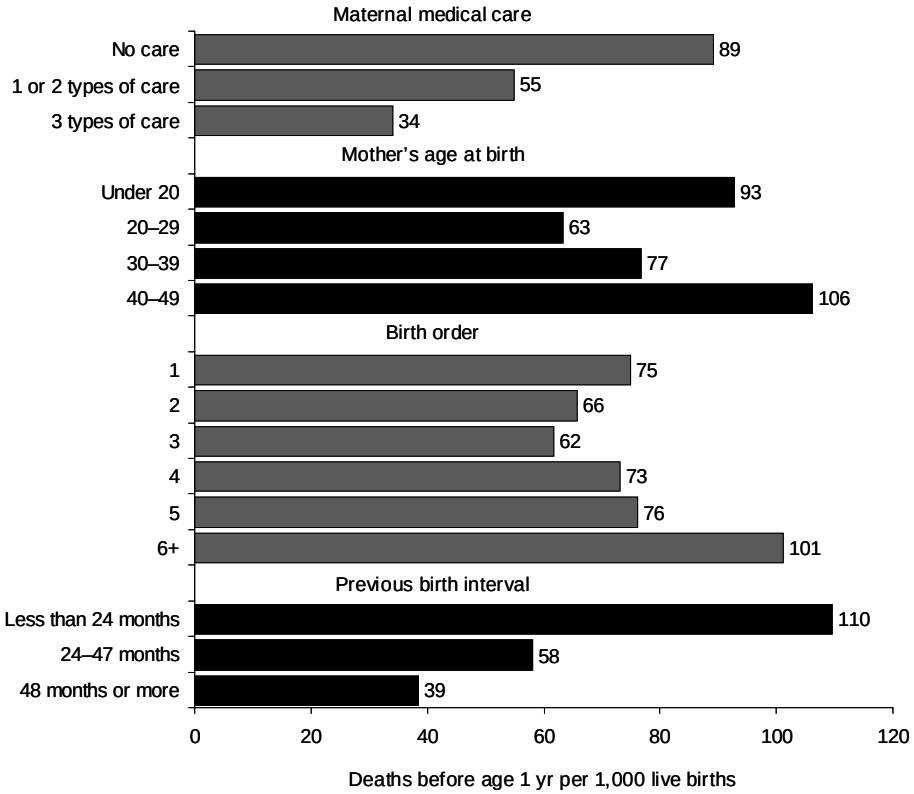

Figure 2 Infant mortality rate by maternal medical care, mother's age at childbirth, child's birth order, and previous birth interval, NFHS-2

Note: Maternal medical care includes: (1) antenatal care received from a health worker; (2) delivery assistance given by a doctor, nurse, trained midwife, or other health professional; and (3) postpartum care received within two months of delivery.

any maternity-related medical care as for children whose mothers received such care (Figure 2).

Infant mortality is also particularly high for children whose mothers are less than 20 or more than 40 years old, for children whose mothers have already had many births, and—most striking—for children who are born less than 24 months after a previous birth. A comparison of results from NFHS-1 and NFHS-2 shows that births to teenage mothers are going down, but births very soon after a previous birth are not. Thirteen percent of births in the three years before NFHS-2 were to mothers age 15–19, down from 22 percent in NFHS-1. By contrast, 28 percent of second or higher-order births in the five years before NFHS-2 occurred within two years of a previous birth, up slightly from 27 percent in NFHS-1.

NUTRITIONAL STATUS

Based on international standards, nearly half (46 percent) of children in India under age three are stunted—a sign of chronic undernutrition, measured in terms of height for age. Undernutrition is much higher in rural areas than in urban areas and is particularly high among children from disadvantaged socioeconomic groups.

Based on a weight-for-height index, more than one-third (36 percent) of women in India are undernourished. Nutritional deficiency is especially widespread among women in rural areas, young women, women in disadvantaged socioeconomic groups, and women who work for an employer outside the family. Women who are undernourished themselves are much more likely than other women to have children who are undernourished.

Obesity is a problem for women in a few population groups and states. About one-fourth of women are obese in urban areas, in households with a high standard of living, and among women with high school or higher education. About one-third are obese in Delhi and Punjab.

Nearly three-quarters (74 percent) of children age 6–35 months are anemic. Anemia is a serious problem among children in every socioeconomic group and in every state. More than half (52 percent) of women in India have some degree of anemia, including at least 40 percent of women in every socioeconomic group. Pregnant women are particularly likely to be moderately to severely anemic.

In an effort to reduce the incidence of iodine deficiency disorders, including mental retardation, the Indian government adopted a series of policies that ultimately banned the sale of non-iodized edible salt. Yet NFHS-2 field staff found that only 49 percent of households in India use salt that is iodized at the recommended level. Another 22 percent use salt with lower levels of iodine, and 28 percent use salt that is not iodized at all.

The use of iodized salt is particularly low among households with a low standard of living and households in rural areas. Salt iodization is also low in India's southern region. In September 2000, the government lifted the ban on non-iodized salt, a move that has caused considerable controversy and strong objections from many health professionals.

INFANT FEEDING AND CARE

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) recommend that most

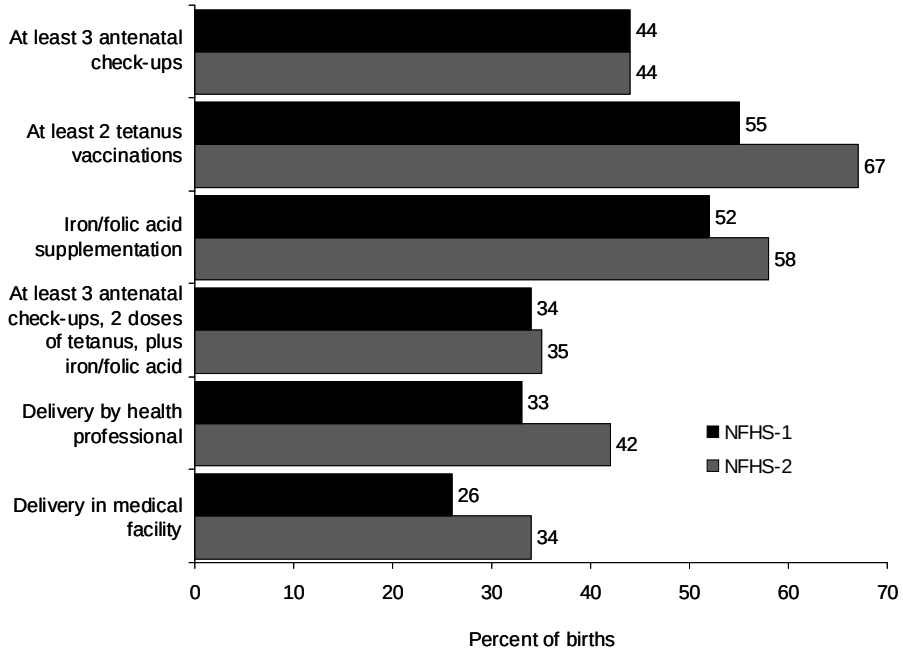

Figure 3 Proportion of births during the three years before NFHS-1 and NFHS-2 that received various types of antenatal and delivery care

children should begin breastfeeding immediately after birth. Most infants should receive only breast milk until about six months of age and then should begin receiving solid or mushy food in addition to breast milk.

Breastfeeding is nearly universal in India, but many mothers do not follow the specific recommendations for infant feeding. Very few children begin breastfeeding immediately after birth—only 16 percent in the first hour and 37 percent in the first day. Just over half (55 percent) of children under four months of age are exclusively breastfed, and only one-third (34 percent) of children age 6–9 months receive the recommended combination of breast milk and solid or mushy food.

NFHS-2 collected information on the prevalence and treatment of three health problems that cause considerable mortality in young children—fever, acute respiratory infection (ARI), and diarrhea. In the two weeks before the survey, 30 percent of children under age three had fever, 19 percent had symptoms of ARI, and 19 percent had diarrhea. About two-thirds of children who had diarrhea or signs of ARI received medical advice or treatment.

Nearly half (48 percent) of children with diarrhea received some form of oral rehydration therapy (ORT), including 27 percent who received the government-recommended oral rehydration salt (ORS) packets. Although the correct treatment of childhood diarrhea is still far from universal, there has been improvement since the time of NFHS-1 when only 18 percent of children with diarrhea received ORS.

MATERNAL MEDICAL CARE

One goal of the Indian government's Reproductive and Child Health (RCH) Programme is for each pregnant woman to receive at least three antenatal check-ups plus two tetanus toxoid injections and a full course of iron and folic acid supplementation. The RCH Programme also encourages women to deliver in a medical facility or, if at home, with assistance from a trained health professional. After delivery, women should receive at least three check-ups.

The proportion of women receiving maternal health care has increased since the time of NFHS-1 (Figure 3). Yet two-thirds of pregnant women still do not receive basic antenatal care, more than one-half of deliveries take place without the assistance of a health professional, and two-thirds of deliveries occur outside a medical facility. Only 17 percent of births outside a medical facility are followed by a postpartum check-up for the mother.

Women in disadvantaged socioeconomic groups are less likely than other women to receive any type of maternal health care. Coverage is also low for women age 35 and older, women who have four or more children, and women in Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh, and several of the small northeastern states. Overall, maternal health services are reaching more women during pregnancy than during delivery or after childbirth.

CHILD IMMUNIZATION

Child immunization is an important component of child-survival programs in India. Efforts focus on six serious but preventable diseases—tuberculosis, diphtheria, pertussis, tetanus, polio, and measles.

As of 1998/99, 42 percent of children age 12–23 months were fully immunized, up from 36 percent at the time of NFHS-1. Higher percentages have received at least some vaccinations: 72 percent have been vaccinated against tuberculosis, 63 percent have received three doses of polio vaccine, 55 percent have received the full course of vaccinations against diphtheria, pertussis, and tetanus (DPT), and 51 percent have been vaccinated against measles. Fourteen percent have not received any vaccinations at all, an improvement from 30 percent who had not received any vaccinations at the time of NFHS-1.

The largest increases in vaccination coverage between NFHS-1 and NFHS-2 are for the first two doses of polio vaccine, undoubtedly because of the Pulse Polio Immunization Campaign launched in 1995. Dropout rates for the series of DPT and polio vaccinations continue to be a problem, however. For both series, one in four children who receive the first vaccination do not receive all three doses.

Children from rural areas, children from disadvantaged families, and children with many older siblings are less likely than other children to be fully immunized or to have any specific vaccination. Girls are slightly less likely to be immunized than boys. Among India's major states, immunization rates are particularly low (less than 23 percent of children fully immunized) in Bihar, Assam, Rajasthan, Uttar Pradesh, and Madhya Pradesh.

AIDS AWARENESS

UNAIDS estimates that 3.7 million Indians are infected with HIV. The government established a National AIDS Control Organization (NACO) in 1989 under the Ministry of Health and Family Welfare and has made extensive use of the mass media, especially the electronic media, to increase public awareness of AIDS.

Despite these efforts, 60 percent of ever-married women in India have not even heard of AIDS. Among women who have heard of AIDS, one-third do not know of any way to avoid infection. Awareness of AIDS is particularly low among women in rural areas, women from disadvantaged households, and women not regularly exposed to the mass media. Among India's major states, AIDS awareness is especially low (less than 23 percent) in Bihar, Uttar Pradesh, Rajasthan, and Madhya Pradesh.

Television is the most important source of information on AIDS, followed by radio, indicating that the government's efforts to increase AIDS awareness through electronic media have achieved some success. Only 60 percent of women are regularly exposed to any mass media, however. Survey results show that health personnel could play a much larger role in promoting AIDS awareness. Only 4 percent of women who know about AIDS learned about the disease from a health worker.

SOME POLICY IMPLICATIONS

Although infant and child mortality have decreased since NFHS-1, 7 percent of all children born in India still die during the first year of life, and 9 percent die before reaching age five. Survey results point to several areas where government policies and programs could help bring mortality rates down.

Among the most striking findings from NFHS-2 are the high infant mortality rates among children born to teenage mothers and children born within two years of a previous birth. Clearly, efforts to expand the use of temporary contraceptive methods—both to space births and to delay childbearing—could have an important impact on infant mortality in India.

The clear link between maternity-related medical care and infant mortality reinforces the urgency of ensuring that all pregnant women receive adequate antenatal care and that deliveries take place under hygienic conditions and with the assistance of trained health personnel. NFHS-2 findings also reinforce the importance of training programs for traditional birth attendants (*dai*), who currently deliver 35 percent of all births.

Undernutrition and anemia are widespread among women and children in every state and in nearly every socioeconomic group. The broad extent of these problems suggests that nutritional deficiencies are related to eating and child-feeding practices and not simply to poverty. Findings on breastfeeding practices also indicate that many women do not follow WHO/UNICEF recommendations. These results suggest that nutritional status might be improved for many Indians through intensified information campaigns.

The proportion of children age 12–23 months who have been fully immunized against six preventable diseases has risen, but rates still fall well short of universal immunization. Among specific vaccinations, the lowest rates are for measles and the full course of DPT.

Information strategies should continue to focus on improving the treatment of childhood diseases and on preventing the spread of HIV/AIDS. In addition to mass media campaigns, there is considerable potential for improving the information and advice provided to women by health personnel.

ABOUT THE SURVEY

NFHS-2 covered a nationally representative sample of 90,316 ever-married women age 15–49 in all 26 states of India. The International Institute for Population Sciences (IIPS) in Mumbai coordinated the survey with field support from five state-level Population Research Centers and eight private research organizations. IIPS coordinated NFHS-1 as well. Two US-based organizations, ORC Macro and the East-West Center, provided technical assistance for NFHS-2. The United States Agency for International Development (USAID) provided financial support, with additional funding from UNICEF.

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